

WHAT IS CLAIMED IS:

1. An imaging element comprising at least one imaging layer and a support wherein said support comprises at least one layer comprising a splayant and a layered material, wherein said layered material has an aspect ratio from 20:1 and 500:1 and wherein said layered material comprises less than 10% by weight of said at least one layer.
2. The imaging element of Claim 1 wherein said splayant comprises an organic splayant.
3. The imaging element of Claim 2 wherein said organic splayant comprises an organic hardening agent or a hydrophilic colloid.
4. The imaging element of Claim 3 wherein said organic hardening agent comprises 1,2-bis(vinylsulfonylacetamido)ethane (BVSAE), bis(vinylsulfonyl)methane (BVSM), bis(vinylsulfonylmethyl)ether (BVSME) and bis(vinylsulfonylethyl)ether (BSEE), 1,3-bis(vinylsulfonyl)propane (BVSP), 1,3-bis(vinylsulfonyl)-2-hydroxypropane (BVSHP), 1,1,-bis(vinylsulfonyl)ethylbenzenesulfonate sodium salt, 1,1,1-tris(vinylsulfonyl)ethane (TVSE), tetrakis(vinylsulfonyl)methane, tris(acrylamido)hexahydro-s-triazine, copoly(acrolein-methacrylic acid), glycidyl ethers, acrylamides, dialdehydes, blocked dialdehydes, alpha-diketones, active esters, sulfonate esters, active halogen compounds, s-triazines, diazines, epoxides, formaldehydes, formaldehyde condensation products anhydrides, aziridines, active olefins, blocked active olefins, mixed function hardeners such as halogen-substituted aldehyde acids, vinyl sulfones containing other hardening functional groups, 2,3-dihydroxy- 1,4-dioxane (DHD), potassium chrome alum, polymeric hardeners such as polymeric aldehydes, polymeric vinylsulfones, polymeric blocked vinyl sulfones and polymeric active halogens.

5. The imaging element of Claim 3 wherein said hydrophilic colloid comprises gelatin, gelatin grafted polymers, including alkali-treated gelatin (cattle bone or hide gelatin), acid-treated gelatin (pigskin or bone gelatin), and gelatin derivatives such as partially phthalated gelatin, acetylated gelatin, and deionized gelatins.
6. The imaging element of claim 2 wherein said organic splayant comprises from 30 to 90 percent weight percent of said at least one layer.
7. The imaging element of Claim 1 wherein said layered material comprises clay.
8. The imaging element of Claim 7 wherein said clay comprises smectite clay.
9. The imaging element of Claim 8 wherein said smectite clay comprises montmorillonite.
10. The imaging element of Claim 1 wherein said layered material is intercalated by said organic splayant.
11. The imaging element of Claim 1 wherein said layered material is exfoliated by said organic splayant.
12. The imaging element of Claim 1 wherein said layered material comprises an aspect ratio of from 100:1 to 400:1 nm.
13. The imaging element of Claim 1 wherein said layered material comprises from 0.5 to 10% parts by weight of said at least one layer.

14. The imaging element of Claim 1 wherein the length of said layered material is greater than 0 and less than 700 nm (0.7 µm)

15. The imaging element of claim 1 wherein said layered material comprises a basal plane spacing of at least 50 percent when the layered material:splayant weight ratio is changed from 100:0 to 30:70.

16. The imaging element of Claim 1 wherein said imaging element comprises a photographic imaging element.

17. The imaging element of Claim 1 wherein said imaging element comprises a thermophotographic imaging element.

18. The imaging element of claim 1 wherein said support is selected from the group consisting of cellulose nitrate films, cellulose acetate films, poly(vinyl acetal) films, polystyrene films, poly(ethylene terephthalate) films, poly(ethylene naphthalate) films, polycarbonate films, glass, metals, papers and polymer-coated paper.

19. The imaging element of claim 1 wherein said at least one layer comprises a curl control layer.

20. The imaging element of claim 1 wherein said at least one layer comprises a layer having improved mechanical properties.

21. The imaging element of claim 1 wherein said at least one layer comprises a curl control layer having improved mechanical properties.

22. The imaging element of claim 1 wherein said at least one layer comprises a dimensional stabilizing layer.

23. The imaging element of claim 1 wherein said at least one layer further comprises crosslinking agents, surfactants, thickeners, coalescing aids, particle dyes, matte beads and lubricants.

24. The imaging element of claim 1 wherein said at least one layer has a dry weight coverage of from 10 mg/m² to 10,000 mg/m².

25. The imaging element of claim 1 wherein said at least one layer has a dry weight coverage of from 200 to 2000 mg/m².

26. The imaging element of claim 1 wherein the Young's modulus of said support enhanced by at least 10%.

27. The imaging element of claim 1 wherein the Young's modulus of said support is enhanced by at least 20%.

28. A method of making a dimensionally stable imaging element comprising providing a support wherein said support comprises at least one layer comprising a splayant and a layered material, wherein said layered material comprises an aspect ratio of from 20:1 to 500:1 and wherein said layered material comprises less than 10% by weight of said at least one layer; and applying at least one imaging layer.

29. The method of Claim 28 wherein said splayant comprises at least one organic hardening agent or gelatin.